

CORRES. CONTROL
OUTGOING LTR NO.

DOE ORDER #

93 RF 10463

EG&G ROCKY FLATS

00000 8011

EG&G ROCKY FLATS, INC.

ROCKY FLATS PLANT, P.O. BOX 464, GOLDEN, COLORADO 80402-0464 • (303) 966-7000

August 26, 1993

93-RF-10463

F. R. Lockhart
Environmental Restoration Division
DOE, RFO

NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) DOCUMENTATION FOR ACCELERATED POND SLUDGE REMOVAL/CONTAINERIZATION - SRK-186-93

Attached is a copy of an Environmental Checklist (EC) for Accelerated Pondsludge Removal that has been reviewed by the plant NEPA Compliance Committee (NCC). The NCC, along with EG&G's Ecology and NEPA Division, has recommended that no further NEPA documentation is required for this proposed action. This recommendation is based on the conclusion that the proposed action is basically a change in on-site location, facility, and status for storage of the solar pond sludge. These changes do not represent a change in scope as described in the FONSI of June 1991.

Please forward this document to the DOE NEPA Compliance Officer requesting concurrence. Concurrence is requested by September 7, 1993. Contact Steve Nesta, Ecology and NEPA Division at extension 8605, or Claire Reno, extension 8620, if further information is needed.

S. R. Keith
S. R. Keith
Director
Solar Ponds Projects

JBM:bep

Attachment:
As Stated

Orig. and 1 cc - F. R. Lockhart

cc:
J. K. Hartman - DOE, RFO
A. H. Pauole - DOE, RFO
R. J. Schassburger - DOE, RFO

DIST.	LTR	ENC
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WILLIAMS, S. (ORC)		
WILSON, J. M.		
WYANT, R.B.		
MELEN, J.B.	X	V
NESTA, S.	X	V
RENO, C.	X	X
ETI	X	V
ERM PECO	X	X
CORRES CONTROL	x	x
ADMIN RECORD		
PATS/T130G		
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DATE

IN REPLY TO RFP CC NO:

ACTION ITEM STATUS

☐ PARTIAL/OPEN

☐ CLOSED

LTR APPROVALS:

ORIG & TYPIST INITIALS

JBM:bep

DOCUMENT CLASSIFICATION
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EG&G ROCKY FLATS
NEPA COMPLIANCE COMMITTEE
ENVIRONMENTAL CHECKLIST REVIEW FORM

EC Date: July 20, 1993

Project Name: SOLAR PONDS SLUDGE REMOVAL

Authorization or EJO# WP#12042 Project PA: K. C. London, ERM, X8585

Initiating Line Manager: S. R. Keith, ERM

NEPA compliance Committee Review (Sign & date applicable space):

	No ADM or Further NEPA Documentation Required	Date	ADM Required
Environ. Doc.:	<u>Claire Reno</u>	<u>8/12/93</u>	
Fac. Proj. Mgmt:	<u>G. David Elliston</u>	<u>8/12/93</u>	
General Counsel:	<u>David M. Muel</u>	<u>8/12/93</u>	
Fac. Safety Eng.:	<u>Phil B. London</u>	<u>8/12/93</u>	

Comments:

CEQ Section 1506.1(c) Review:

1. Project justified independently	<u>Yes</u> X	<u>No</u>
2. Project will prejudice program decision		X

10 CFR 1022 Review (wetlands issue) needed:

NCC Recommendation: X No ADM or further NEPA documentation
 ADM required

END Mgr. Approval/Date: S. M. Neale 8/19/93

ROCKY FLATS PLANT

ECOLOGY & NATIONAL ENVIRONMENTAL POLICY ACT DIVISION
ENVIRONMENTAL CHECKLIST

CHARGE NUMBER: 989135 SB

I. Date: 7/20/93

II. Activity/Project Name: Solar Ponds Sludge Removal

III. Authorization/Project Number: WP 12042 IV. EG&G Project Administrator: Tom Beckman

ADS Number (E&WM only): 1258 DOE Program Sponsor: EM / Frazer Lockhart

V. Initiating Line Manager: Steve Keith

VI. A. Project/Activity Description (attach pages as needed):

attached

B. Total Estimated Cost:

tbd, but so far we
estimate \$ 3.2 Million to
purchase equipment
(mostly the storage
containers)

"Reviewed For Classification"
By not applicable per
Date classification
office exemption

Checklist

YES NO

- VII. Statutes applicable:
- A. Will the project require or potentially require an application for permit or permit modification under:
1. Clean Air Act? ☐ ☒
2. Clean Water Act? ☐ ☒
- B. Does the project involve RCRA permitting? (if "no", skip to C) ☒ ☐
1. Will a RCRA permit or modification be required? ☒ ☐
2. Does the project include a removal? ☒ ☐
3. Does project include RCRA closure?
- partial? ☐ ☒
- full? ☐ ☐
4. Does project include excavation or capping to meet RCRA requirements? ☐ ☒
5. Will cost and duration stay within \$2 million and 12 months? (Explain in project description.) ☐ ☒
- C. Does the project involve CERCLA? (if "no", skip to D) ☐ ☒
1. Does project include CERCLA removal? ☐ ☐
2. Will cost and duration stay within \$2 million and 12 months? (Explain in project description.) ☐ ☐
- D. Does the project threaten to violate statutory, regulatory, or permit requirements, or DOE Order? ☐ ☒
- E. Will the action be in or near a SWMU? ☒ ☐
- F. Does the project potentially impact threatened & endangered species or habitat, the Migratory Bird Treaty Act, or Fish and Wildlife Coordination Act? ☐ ☒
- VIII. Will this project construct or require a new or expanded waste disposal, recovery, storage or treatment facility? ☐ ☒ See description
- IX. Is project needed for IAG, AIP, FFCA, or other federal or state agreement? (Specify and explain any schedule urgency and deadlines in project description.) ☒ ☐
- X. Is the project:
- A. new process, building, etc.or ☐ ☒
- B. a modification to an existing? ☒ ☐
- C. capital equipment/machinery installation? ☐ ☒
- XI. Location Items:
- A. Will the project result in, or have the potential to result in, long term changes to the environment? ☐ ☒
- B. Will the action occur outside the security zone/protected area (i.e., outside Gate 8 at Post 100 and Gate 10 at Post 900)? ☐ ☒
- C. Will the action take place in a wetland or floodplain? ☐ ☒

Note: project is a precursor to closure

Checklist

	YES	NO
XII. Will the project result in changes and/or disturbances of the following existing considerations?		
A. noise levels	—	<u>X</u>
B. air emissions	—	<u>X</u>
C. liquid effluents	—	<u>X</u>
D. solid wastes	<u>X</u>	—
E. radioactive wastes (including contaminated soil)	—	<u>X</u>
F. hazardous waste	—	<u>X</u>
G. mixed waste (radioactive and hazardous)	<u>X</u>	—
H. chemical or petroleum product storage	—	<u>X</u>
I. water use (withdrawal of groundwater or diversion or withdrawal of surface water)	—	<u>X</u>
J. drinking water system	—	<u>X</u>
K. sewage disposal system	—	<u>X</u>
L. soil movement outside facility fences or beyond SWMU boundaries	—	<u>X</u>
M. site clearing, excavation, or other physical alterations to grade	—	<u>X</u>
XIII. Will the project threaten public health or safety?	—	<u>X</u>
XIV. Will the project have possible effects on the environment which are likely to be highly controversial?	—	<u>X</u>
XV. Will the project establish a precedent for future actions that will have significant effects, or represent a decision in principle about a future consideration?	—	<u>X</u>
XVI. Will the project be substantially related to other actions that have individually insignificant but cumulatively significant impacts?	—	<u>X</u>
XVII. Will the project adversely affect federal, state, or locally designated natural areas, prime agricultural land, special water sources, or historic, archeological, or architectural sites?	—	<u>X</u>

EC Prepared by: Kathy London

Date: 7/20/93

Organization: ERM

Bldg: 080

Extension: 8585

ROCKY FLATS PLANT
END
ENVIRONMENTAL CHECKLIST
ATTACHMENT
7/19/93

Solar Ponds Sludge Removal:

VI. A. Project/Activity Description

GENERAL

The project described in this Environmental Checklist is a change in scope to an action included in the Environmental Assessment Dewatering and RCRA Partial Closure Action on Solar Evaporation Ponds Rocky Flats Plant, Golden, Colorado (DOE/EA-0487).

The purpose and need for the proposed action remain unchanged. The activities necessary to complete RCRA closure, as described in the introductory paragraph of the EA § 4.0, also remain unchanged:

- Dewatering of impounded water via natural, enhanced natural, and forced evaporation;
- Forced evaporation of water collected by the ITS, and residual water resulting from precipitation;
- Removing, treating, and disposing of the pond sludges and sediments;

Note: Waste from the Solar Ponds (207-B, 207-C, and the Clarifier) would still be removed from the impoundments if this scope change is incorporated. Excess water would be decanted off the sludge and pumped to Building 374 for treatment. Building 910 is also permitted to treat pond water, though Building 374 currently has sufficient capacity to treat all the excess pond water. While not explicitly described in the EA, these pumping and treatment activities are necessary for the proposed action whether or not the scope change is incorporated.

- Removing, treating, and disposing of the process by-products, such as evaporator distillates and concentrates; and

The scope change proposed involves the timing of sludge removal, treatment, and disposal; and in particular the inclusion of a storage period for the sludge not previously included in the proposed action. (The scope change effects EA Description of Proposed Action, § 4.1.2.) Storage for the sludge would be procured and installed on the 750 Pad (It appears the storage would be "containers" within the definitions of DOE Order 6430.1A, but "tanks" within the definitions of RCRA.) To move the sludge to storage, existing HNUS equipment, per the original EA, would be almost completely sufficient, with the possible addition of some pumps and lines tailored to the storage project.

REASON FOR SCOPE CHANGE

The scope change is being proposed due to a change in a key assumption for the project. Previously, DOE expected to be able to dispose pondcrete at the Nevada Test Site (NTS) in the near-term. That assumption has proved to be invalid, and DOE now estimates that a disposal site for the pondcrete (and saltcrete) will be available in 1998 at the earliest. DOE is evaluating both DOE and commercial sites for disposal (as was mentioned in the EA, page 9). This lack of a disposal site has forced the project to incorporate a substantial storage period for the pond waste at Rocky Flats.

A storage period of about ten years is currently being used for planning purposes. Because of this extended storage period, it is difficult to predict what Waste Disposal Criteria (WAC) will be in effect at the time of future disposal. This uncertainty has led to a re-evaluation of whether the sludges should be solidified prior to identification of a disposal site and WAC, and may invalidate the statement in the EA (page 9) that "[p]rocessing solar pond sludge into pondcrete... will not prejudice any reasonable future storage or disposal options." Concurrently, DOE has begun a study of delisting the pondcrete; if successful, delisted pondcrete could be disposed as straight low level waste, which may improve the disposal schedule.

The scope change is further driven by the Interagency Agreement (IAG). The DOE has missed one Operable Unit 4 (OU 4) IAG milestone and will miss a second. DOE is currently negotiating a dispute-resolution over these milestone dates with the Colorado Department of Health (CDH) and Environmental Protection Agency (EPA). To successfully resolve the dispute, it appears necessary to accelerate the closure of OU 4 by about one year, and that schedule constraint will drive near-term removal of pond sludges.

No scope change to the saltcrete portion of the action is proposed. While the pond sludges are an essentially fixed volume of waste with no further waste-generation, water sent to Building 374 is from continuously-generated streams that must be processed to protect the environment and meet regulatory requirements.

DETAILED INFORMATION

Since the completion of the EA and Finding of No Significant Impact (FONSI), the water and sludge in Pond 207-A has been slurried and pumped into the 207-B Ponds. Further consolidation of water and sludge into 207-B South is proceeding, and may be complete by the end of the calendar year. Since the A and B Ponds are a single RCRA unit, this consolidation is proceeding under the existing permit. Excess water is pumped to Building 374 for treatment, which is also proceeding under the existing permit.

To incorporate the necessary storage step, the following scope change is proposed:

- Solar Pond sludge is currently stored on-site in the Solar Pond surface impoundments. In the scope-change, sludge would be removed from the Solar Ponds and stored on-site (change to EA page 8, "solidified prior to short-term onsite storage") on 750 Pad. It is possible to add enough containers (probably to consist of "frac tanks", which hold about 21,000 gallons each, and "roll-off containers", which resemble liquid-tight trash dumpsters) to the existing 750 Pad (with re-arrangement of some of the items currently on the pad) to accomplish the storage.

- The volume of sludge to be stored is unchanged: the storage location is changed from the pond impoundments to the storage pad. Sludge contains a large percentage of water, and both sludge and water would be stored. To support the expedited schedule, all the water needed to mobilize and pump the sludge will be included in the sludge storage.

In terms of the volume of waste to be stored on the 750 Pad: The EA considered about 3100 cubic yards of sludge which would be cemented into about 6200 cubic yards of pondcrete. Under the proposed scope-change, approximately 4400 cubic yards (900,000 gallons) of sludge and water would be stored.

To move the sludge from the impoundments to the storage pad, the existing equipment planned for the original scope of work, and analysed in the existing EA, will be used. Additional storage tanks would be needed. Additional pumps may be needed, and some new lines may be added to facilitate the storage project.

Note: Studies to allow EG&G to recommend to DOE storage equipment and determine whether a change to the plant's RCRA permit is needed are underway. Various containers -have been evaluated, such as 55-gallon drums, bladder-containers, "roll-off tanks", which resemble liquid-tight trash dumpsters, and 500-barrel "frac tanks", which are trailer-mounted containers commonly used in the petroleum industry. Tanks similar to the Modular Tanks recently installed on the hill north of Building 774 were also evaluated, with siting on the 750 Pad (which requires removal of some or all of the 750 Pad tents). If tank sites off the pad were to come under serious study, this Environmental Checklist would be amended.

- DOE would select a treatment process for the sludge when a disposal site and WAC are known. Cementation, the current "baseline" for the project, may or may not be chosen at that future time (for sludge and re-mix processing), so the EA statements that "solids would be mixed with cement to form pondcrete blocks (page 8)" and "existing operations involving remixing (page 9)" are not negated by the proposed scope change.
- The 750 Storage Pad is currently under Interim Status. Preliminary feed-back from the CDH indicates that CDH will grant a change to Interim Status to accommodate the sludge storage in tanks. The change to Interim Status would be replaced with a Part B Permit Modification in the future.

The section of the EA that appears to be most effected by the proposed scope change is §6.9, Storage Impacts. Following is a point-by-point discussion:

- DOE proposes to dispose the waste at NTS, and is exploring other storage/disposal locations. Unchanged.
- Pondcrete would be stored in packaging that satisfies transportation and disposal acceptance criteria. While existing pondcrete was stored in such containers at the time it was packaged, changing requirements may invalidate the statement in the future. The sludge proposed for storage in this scope change would not be stored in transport-containers, but rather in tanks up to about 25,000 gallons. The tanks would be initially Part A, Interim Status storage, but would be

installed to meet Part B Permit requirements, and a Part B Permit would be obtained.

- Because the waste is low in contaminants, solid, packaged, and compliant with RCRA, storage would not change the impacts. The conclusion that storage would not materially change the impacts is still valid. All the sludge storage would be inside the existing, heated tents. RCRA requirements such as double-containment, contingencies to handle any leaks, and inspections would be used. Dust would be suppressed by keeping the sludge wet, and air-monitoring is already in-place to evaluate any inhalation hazard from radionuclides. Personnel protection meeting applicable standards would be identified and used. Preliminary contact with EG&G Nuclear Safety indicate a qualitative safety analysis would be sufficient to meet the requirements of DOE Order 5481.1B.

ALTERNATIVES

No Action would consist of following the action in the EA/FONSI. Due to the lack of a disposal site, this would create a lengthy suspension of activities in the present configuration, leaving the sludge in the surface impoundments. This alternative is unattractive, as it suspends progress on the closure of OU 4 which would violate DOE's commitments in the Interagency Agreement (IAG), and extends the period of time that waste is stored in surface impoundments that fail to meet current minimum technical requirements.

In Alternative 1, DOE could proceed with cementing the pondcrete, and suspend activities at the point where pondcrete is stored at Rocky Flats. This alternative is unattractive, as it incurs the risk that reprocessing would be needed to meet some future, unknown WAC.

In Alternative 2, closure of OU 4 with the sludges in-place would be pursued. While this alternative may be theoretically possible, the CDH has informally estimated that the permitting for such an alternative could take many years, and that the proximity of OU 4 to Walnut Creek may eliminate the potential to close the OU in this manner. The lengthy time-frame and CDH's low estimate of the chance of success make this alternative unattractive. (Please note that the NEPA/CERCLA/RCRA integration strategy would be used to document closure.)

NOTES ON CHECKLIST ITEMS

VII. B. 3: Does the project involve RCRA closure? The project is a precursor to RCRA closure under the IAG. This status is the same as when the EA was written and the FONSI issued by DOE. No change has occurred.

5: Will cost and duration stay within \$2 million and 12 months? No. The original scope of the project was over \$2 million and 12 months. Since the cost of the project is somewhat fixed by the Five-Year Plan, the funding profile is unlikely to change substantially, regardless of scope changes. The storage time, however, will extend well beyond 12 months.

VII. C: Does the project involve CERCLA? No. The sludge-removal project is strictly handling of mixed hazardous wastes under RCRA. While the IAG does combine RCRA and CERCLA actions, the OU 4 Solar Ponds are a RCRA unit.

VIII. Will the project construct a new or expanded waste disposal, recovery, storage, or treatment facility? The project continues to assume the same waste disposal and waste recovery (that is, the Building 910 portion of the full scope analyzed in the EA) as previously included in the EA. Waste treatment is also the same (though the possibility that a different technology than cementation could be chosen in the future exists). The scope change involves storage. Preliminary results indicate that the existing 750 Pad would accommodate the sludge storage.

X. Is the project a new process, a modification, or equipment installation? No "process/treatment" changes to the EA are proposed. A storage modification is proposed, in that sludge rather than pondcrete would be stored, but the EPA waste codes would be the same. Whether the storage containers would be viewed as capital or expense equipment is unclear at this time.

XII. C. Will the project change liquid effluents? No. The water decanted off the sludges moved into storage would be the same excess pond water currently shipped to Building 374 for treatment. (Currently, excess water from the A and B Ponds is treated in Building 374. If excess water were to be available from C Pond due to the sludge storage operation, that water would also be treated in Building 374. Building 374 waste-acceptance criteria provide the standards for shipment of waste water to the facility.) Any water added to help slurry the sludge would be the same water needed to slurry sludge into the pondcrete process as described in the EA.

XII. M. Will the project change site clearing, excavation, or grade? No. This Environmental Checklist would be updated if such expansion were found to be necessary.

XV. Will the project establish a precedent for future action? No. The scope change reflects problems with executing the original project plan, and should have no impact on the overall NEPA-compliance strategy for IAG and RCRA activities.

XVI. Will the project be substantially related to other actions? No change from the situation analyzed in the original EA and issued in DOE's FONSI has occurred nor is proposed.